6.3 DOWNTOWN REDEVELOPMENT - RETROFITS

Grant funding is often available for projects that incorporate sustainable stormwater components as part of downtown renovation. High density and downtown areas frequently have space constraints that preclude the use of swales and filter strips. However, options such as bioretention and porous pavement are available, used either together or individually, to reduce the impacts of stormwater and improve the performance of the streetscape.

When designing a pedestrian walkway near a busy road, the use of swales or bioretention strips between the sidewalk and road can help the pedestrian feel insulated from nearby traffic and therefore more comfortable walking in groups or with children and pets. As shown in Figure 6-9 and Figure 6-10, the stormwater benefits of these structures are complimented by the use of porous pavement and can be, integrated with the social and aesthetic benefits afforded by the landscaping.

Figure 6-9: Bioretention serves as a buffer between the sidewalk and street. (Photo courtesy of State of Washington Transportation Improvement Board)

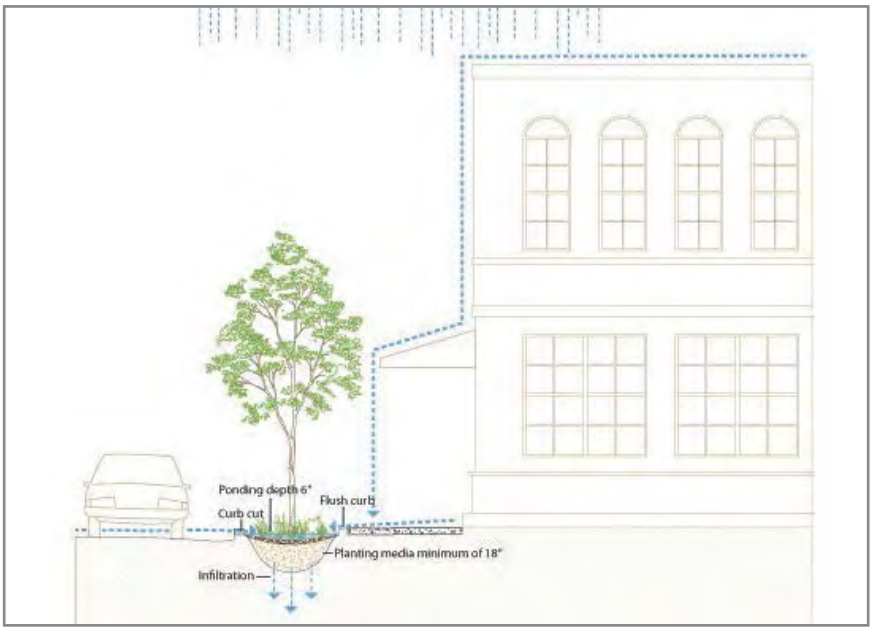

Figure 6-10: Schematic of a bioretention area with no underdrain creating a buffer between the pedestrian zone and the street; stormwater infiltrates into surrounding soils.

Medians and bike lanes afford additional opportunities for stormwater capture and filtration, as in Figure 6-11.

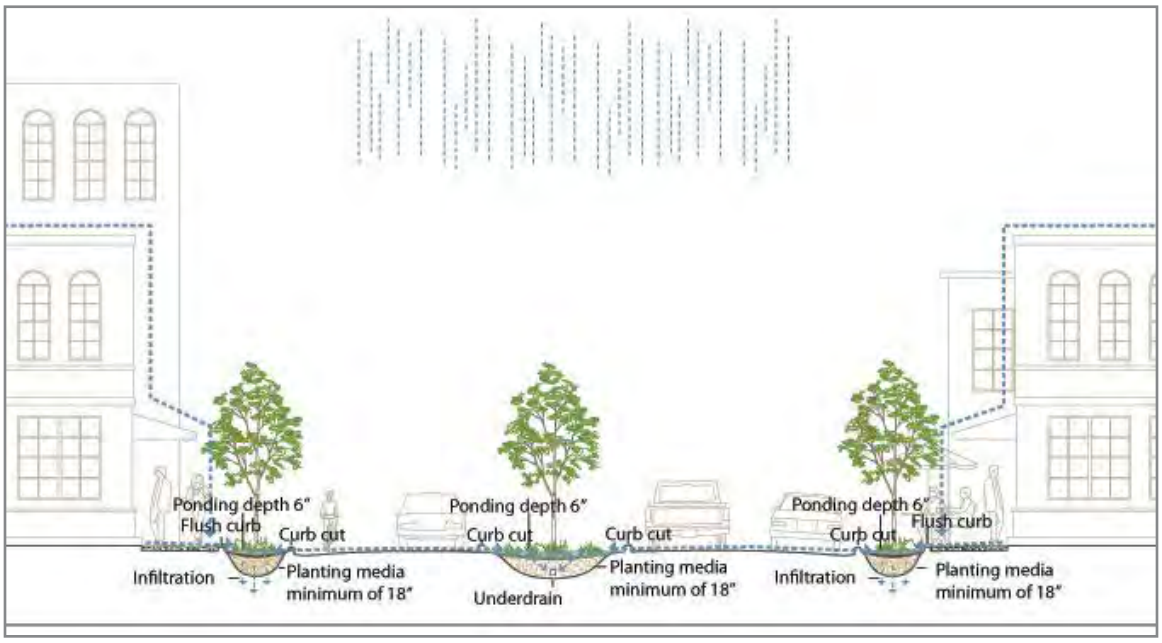

Figure 6-11: Bioretention along streets with a combination of infiltration and underdrain.

The use of alternate material for bike lanes and pedestrian crossings, such as that in Figure 6-12, can increase the safety of those biking or walking. Porous pavement can eliminate standing water on the surface of the area and reduce opportunities for slipping or skidding. Alternate materials also serve to delineate the space, reducing the possibility of a vehicle crossing into the bike lane or failing to stop for a pedestrian.

Figure 6-12: Pedestrian crossing constructed with pervious pavers.

The following renderings (Figure 6-13 through Figure 6-15) illustrate possibilities for downtown redevelopment that incorporates stormwater controls while maintaining the local character of the place and improving the

user experience. The renderings are set in Port Isabel, Texas. Given that tourism in Port Isabel is the primary economic driver, the visitor experience can have an appreciable impact on economic growth in the area. The "before" photograph is shown in Figure 6-13.

Figure 6-14 shows pervious pavers on the sidewalks and bioretention areas between the sidewalk and the street that can easily be incorporated into a redevelopment project. These features also provide more shade for pedestrians and parked cars and create a stronger buffer between people on the sidewalk and traffic on the street. Figure 6-15 demonstrates how these stormwater controls can be integrated seamlessly into the fabric of downtown life.

This type of redevelopment can be achieved with very little expense to the city. As redevelopment of private property occurs, stormwater controls can be incorporated into the new design with no cost to the city.

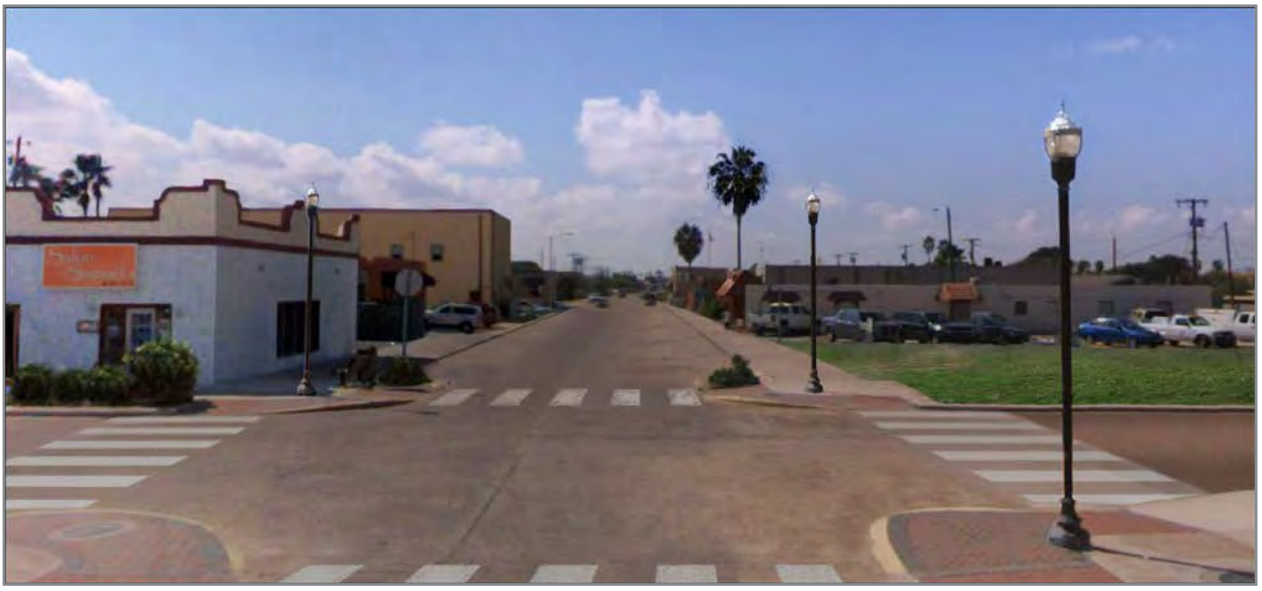

Figure 6-13: Downtown redevelopment BEFORE stormwater controls.

Figure 6-14: Downtown redevelopment. Existing site WITH potential stormwater changes.

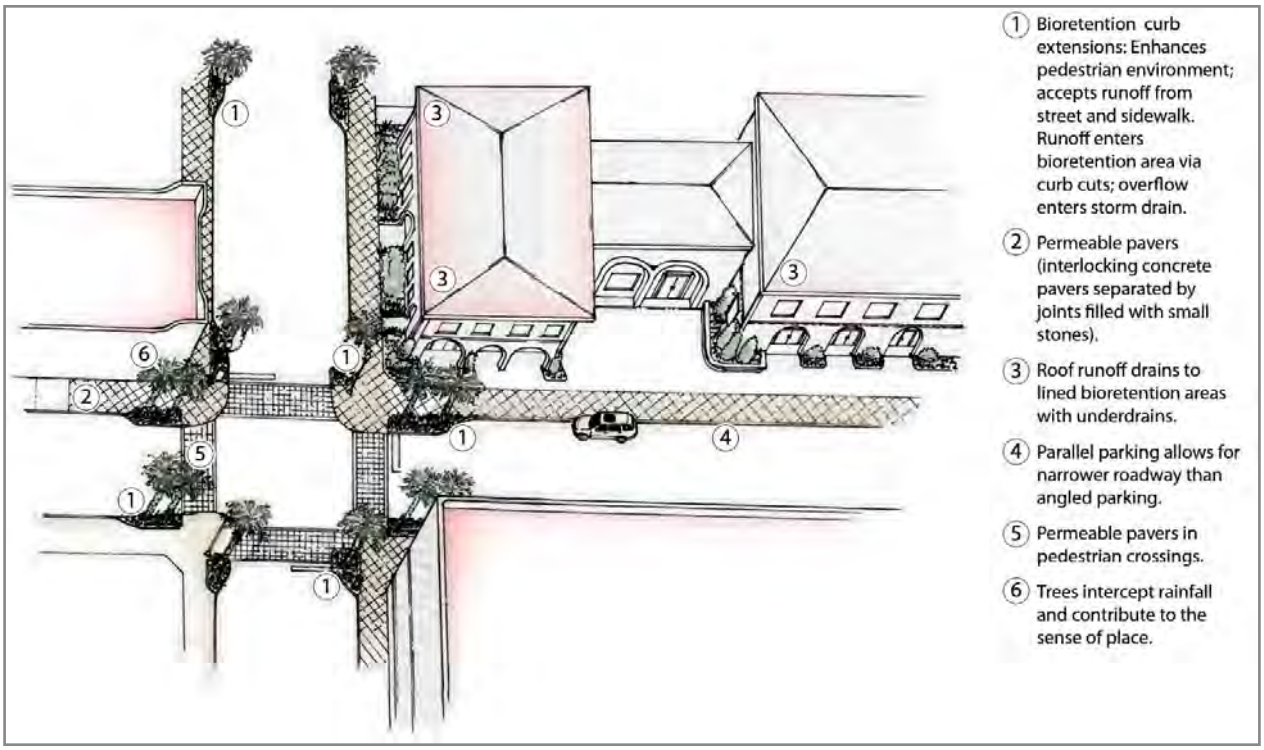

Figure 6-15: Downtown redevelopment. Birds-eye view of stormwater controls.